

Abstract.

Composite cordierite honeycomb structures especially suitable for diesel exhaust filtration applications comprise a non-oxide polycrystalline phase constituting 10-70% by weight, with the remainder of the ceramic material constituting a cordierite phase, the non-oxide polycrystalline phase being selected from the group consisting of carbides, nitrides, and borides. Preferably the non-oxide phase is either polycrystalline silicon carbide or polycrystalline silicon nitride and has a particle aspect ratio of less than 3. Inventive ceramic bodies are porous with an open porosity of at least 30%, preferably between 40% and 60%, and a median pore size of at least 5 micrometers, more preferably greater than 8 micrometers and less than 12 micrometers.